

WEALTH IN OYSTER SHELLS

BY RENÉ BACHE

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WHEN a man chops off the butt end of a boiled egg at the breakfast table, it hardly occurs to him to think that he is dealing with a marine product, and yet the egg, so far as its shell is concerned, is likely to answer to that description, inasmuch as the lime of which it is composed may have been originally separated from sea water by an oyster.

Vast quantities of oyster shells are ground up for chicken feed, and are forwarded in this shape by the tens of thousands of bushels to the Middle West, the great egg producing region of the world. Factories on the Chesapeake and along the Gulf Coast handle them in this way, reducing them to small scraps in machines somewhat like rock crushers, though much less in size. Finally they are put up in bags for shipment, the limy dust incidentally produced being thrown away.

This dust will likely be saved as a valuable byproduct a few years from now, in obedience to the growing economic tendency to turn all sorts of waste to useful account. As for the broken oyster shells, they reappear commercially not only as eggshells, but also as chicken bones, actually furnishing material for the skeletons of millions on millions of the fowls that come to market.

YET it was only twenty years ago that oyster shells were regarded as of less than no value, and the packing companies engaged in canning the "meats" had much trouble to dispose of them. When they could not give them away, they paid money to have them carted off and dumped. In 1890 the marketmen of Baltimore paid twenty thousand dollars to get rid of oyster shells, the accumulation of which was a perpetual and ever increasing nuisance.

Since then, however, it has been discovered that oyster shells should be regarded rather as an asset than as a liability. In 1892 the wholesale shuckers at Baltimore were getting half a cent a bushel for their shells, and since then the price has risen, until now this long despised article of merchandise commonly brings a cent and a half a bushel. The shells are shipped by thousands of tons from Maryland to other States, where they are used for making roads, in the manufacture of carbonic acid gas, in the production of special grades of iron, and for railroad beds. For the last purpose they serve almost as well as stone.

One sees workmen mixing mortar for a building that is going up. The lime put into it (an essential constituent) is derived from oyster shells. Fences and outhouses are painted with whitewash, a substance the very name of which has come to have a peculiar significance as implying cleanliness and the effective discouragement of germs. Whitewash, of course, is merely oyster shells in solution.

THE most important use of oyster shells, however, is for cultch (the term applied to material put into the water for young oysters to grow upon). At present the bulk of the oyster shells produced in the waters of New York, Connecticut, and Long Island is turned to account in this way. The shells are dumped upon the bottom in June, when the spawning season of the oyster is beginning, and invite the baby bivalves to settle upon them.

The process might be likened to scattering corn cobs over dry land with the expectation of picking up ripe ears in full grain a few months later. By the adoption of this method not less than one-third of the entire bottom of the great estuary known as Long Island Sound is made to yield as regular a crop as any farming land; thousands of acres being used exclusively for the production of seed oysters, which, when grown to the size of one's thumbnail, are dredged up and planted in other places, to mature and reach marketable size. Some of the subaqueous farms in the sound are eight miles from shore and at a depth of eighty feet.

Fresh or green oyster shells are not suitable for employment as cultch. They are likely to be more or less coated with marine algae, which render them slimy, so that the free-swimming baby oysters cannot take firm hold. For this reason it is customary to keep the shells for a year or more, exposed in heaps to the air, at the end of which time they are clean, bright, and ready for use.

The annual output of oyster shells in this country is twenty-five million bushels. It is reckoned that the shells landed on the shores of Maryland alone during the last hundred years have amounted to thirteen million five hundred thousand tons, a weight far greater

than the combined tonnage of all the steam vessels in the world. And yet all of this immense mass of material was separated out by the humble mollusks from a fluid (sea water) that contains only one twenty-four hundredth part of carbonate of lime, the substance of which the shells are almost wholly composed.

It has been said of the town of Crisfield, in Maryland (one of the most important centers of the oyster packing industry), that it is "built on oyster shells and mosquitos." As a matter of literal fact, it is built in the water upon the shells of oysters that its canneries have packed and shipped to all parts of the United States. When an oyster is opened at Crisfield, its shell goes to make new land. By this means has been formed a peninsula stretching more than a mile from the low, marshy shore of the Chesapeake toward the oyster beds, and furnishing room for wide streets, a railroad, a steamboat landing, a number of large packing houses, and the shops and dwellings of a population of several thousand people. One glance at the long white streets of this singular town gives a more vivid notion of the size of the oyster packing business than any number of tables of statistics.

IF one looks in the encyclopedia for the word "betel," he finds that it refers to the nut of the so called betel palm, which (this authority states) is chewed by one-tenth of the human race. In many parts of the Orient it is as much a matter of course to offer betel to a guest as it is in our own country to offer coffee. It has some sort of agreeable toxic effect, with which we are unacquainted—fortunately, inasmuch as it stains the lips red and turns the teeth black.

The juice is very acrid, and to neutralize it a pellet of lime is wrapped with the bit of betel nut in a piece of betel leaf, all three being chewed together. Now, this lime is shell lime, derived from the burning of oyster shells. But—and here is a curious fact not hitherto published—the rajahs and other wealthy personages in India and other parts of the Far East deem such common lime not good enough for their aristocratic use, and buy pearls for the purpose. It is this demand that furnishes a market for the bulk of the less valuable fresh water mussel pearls found in the Mississippi Valley. They are shipped to the Orient, where they bring good prices, for conversion into lime, to be chewed with betel by those who can afford so expensive a luxury.

WHEN THE LIMITED STOPS

THE dogs of the few-and-far-between villages of Western Texas are the possessors, perhaps through necessity, of a precocity that affords the weary traveler on the transcontinental Pullman some entertainment as pleasurable as it is brief.

The through trains stop at most of these towns, many of which are from two to four hours' run apart. As the engine whistles and begins to slow down the dogs of the town start in an animated trot for the station. The animated trot is in itself something worth seeing; for Texas dogs are chronically lazy.

When the train comes to a stop the traveler will see the dogs lined up alongside the dining car, their gaze fixed expectantly on exactly the proper window; in other words, the kitchen window. They slowly wag their tails and wait. The chef and his help know the dogs are there, and presently some choice scraps of eatables are thrown out. Then there is a scramble, and the lucky dog bolts his treasure at a gulp. It is a good natured scramble, however,—no fights; only a few harmless growls and whines. Before the train pulls out each dog usually manages to get a bite or two. If one gets left out he waits for the next train with a diner.

At Langtry, the place where that eccentric justice of peace, Roy Bean, administered "law west of the Pecos," the dogs have rivals. There the village hogs also come down to the station to meet the Pullman diners. Strange to say, there seems to be no bitter enmity between the dogs and the hogs. Both take their chances with philosophic equanimity; the dogs, of course, getting a little the better of the deal. But occasionally a hog gets a mouthful, and when it does it scurries away as though it felt that its patience and vigilance had been amply rewarded.

When the train gets into Louisiana the town stops are diversions of a different variety. The little picanninies know the running schedule as well as the engineer or conductor, and when the train stops they are